

TRANSLATION

PATENT COOPERATION TREATY

02 JUN 2005 PCT

10/53

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY PCT  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 027229 PC		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/CN03/01025	International filing date (day/month/year) 01.Dec.2003 (01.12.03)	Priority date (day/month/year) 04.Dec.2002 (04.12.02)	
International Patent Classification (IPC) or national classification and IPC IPC <sup>7</sup> :C12N1/20;A01N63/00			
Applicant SHANGHAI ZEYUAN MARINE BIOTECHNOLOGY LTD et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 3 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of the actual completion of the international search 19.Jul.2004 (19.07.04)		Date of mailing of the international search report 01.Mar.2005 (01.03.05)	
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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN03/01025

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- |         |       |                                     |
|---------|-------|-------------------------------------|
| pages   | _____ | as originally filed/furnished       |
| pages * | _____ | received by this Authority on _____ |
| pages * | _____ | received by this Authority on _____ |
- ☐ the claims:
- |         |       |   |
|---------|-------|---|
| pages   | _____ | as originally filed/furnished                             |
| pages * | _____ | as amended (together with any statement) under Article 19 |
| pages * | _____ | received by this Authority on _____                       |
| pages * | _____ | received by this Authority on _____                       |
- ☐ the drawings:
- |         |       |                                     |
|---------|-------|-------------------------------------|
| pages   | _____ | as originally filed/furnished       |
| pages * | _____ | received by this Authority on _____ |
| pages * | _____ | received by this Authority on _____ |
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, Nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, Nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN03/01025**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement:**

Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims	1-10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

**2. Citations and explanations (Rule 70.7)****Reference is made to the following documents:**

D1:CN1092397A,SHENYANG APPLIED BIONOMIC INST CHINESE, (21.09.94)

D2:CN1125046A,XINJIANG BIOLOGICAL SOIL DESERT INST CHI, (26.06.96)

D3:CN1074803A,(UYBE-N) UNIV BEIJING, (04.08.93)

D1 disclosed a polyhydric biological organic cpd. fertiliser comprises organic matter as the carrier for loading functional microorganisms and various inorganic nutriment. The organic carrier is brown coal or bone meal. The microorganism is azotobacteria, potassium-bacteria or phosphorus-bacteria. The mixt. comprises microorganisms (3-10), organic carrier (40-60) and inorganic fertilizer (20-40).

D2 disclosed amicrobial composition which mainly comprises PG6 microbial flora separated and screened from rhizosphere soil of psammophyte. The said composition is useful in raising the yield of crops such as wheat, barley and maize

D3 have disclosed a TG26 microbial preparation which containing *Bacillus subtilis* and  $\text{CaCO}_3$ . The said TG26 microbial preparation could raise the output of production, and it can be used for preventing and curing bacterial wilt, blight or stalk rot.

**1. Novelty (Article 33(2)PCT)**

The embodiment of claims 1-10 of the present invention are not the same as the prior art.

Claims 1-10 are novel under PCT Article 33(2).

**2. Inventive step (Article 33(3)PCT)**

The claims 1-10 of the present invention claimed a kind of microbial preparation, its uses and application methods. The said preparation contains *Paenibacillus polymyxa* or its Back-extraction. The said microbial preparation can be used for preventing and curing the plant bacterial wilt and seedling blight at the seedling stay, damping-off, fusarium wilt of cucumber, Tomato fusarium wilt, tobacco brown spot, soybean root rot and so on, it also has strong growth stimulatory activity for plant.

These claims 1-10 have inventive steps compared with the D1,D2 and D3. Which would have been not obvious to one of ordinary skilled in the art.

Claims 1-10 of the present application have inventive steps under PCT Article 33(3).

**3.Industrial applicability (Article 33(4)PCT)**

Since the microbial preparation are very useful in preventing and curing the plant bacterial wilt and seedling blight at the seedling stay.damping-off, fusarium wilt of cucumber, Tomato fusarium wilt, tobacco brown spot, soybean root rot and so on.

So claims 1-10 have utility under PCT Article 33(4).